

FEB 19 1982

DMC 20-1

U.S. DEPARTMENT OF LABOR  
WORKPLACE STANDARDS ADMINISTRATION  
BUREAU OF LABOR STANDARDS  
**MATERIAL SAFETY DATA SHEET**

FORM NO. OSHA-20 (MODIFIED)  
MAY 1971

MDC CONTROL NO. \_\_\_\_\_

**SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION**

MANUFACTURER'S NAME Expanded Rubber and Plastics Corporation		EMERGENCY TELEPHONE NO. (213) 321-4260
ADDRESS (NUMBER, STREET, CITY, STATE AND ZIP CODE) 14000 South Western Ave. Gardena, California 90249		
CHEMICAL NAME AND SYNONYMS Polyurethane Rigid Foam System, CO <sub>2</sub> Blown	TRADE NAME AND SYNONYMS Stafoam	
CHEMICAL FAMILY Polyester Polyol and Isocyanate Prepol	FORMULA AA 602	

**SECTION II: HAZARDOUS INGREDIENTS\***

PAINTS, PRESERVATIVES/SOLVENTS	%	TLV (UNITS)	ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES*				%	TLV (UNITS)
Component T - Polyol-Aromatic Polyisocyanate Blend 75% TDI					0.02 ppm

**SECTION III: PHYSICAL DATA**

BOILING POINT (°F)		SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	Component T Component R	1.22 1.10
VAPOR PRESSURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)		
VAPOR DENSITY (AIR = 1)		EVAPORATION RATE (_____ = 1)		
SOLUBILITY IN WATER				
APPEARANCE AND ODOR				

**SECTION IV: FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED) Comp R=280°F, Comp.T=295°F (C.O.C.)	FLAMMABLE LIMITS Fire point 300°F (C.O.C.)	Lel	Uel
EXTINGUISHING MEDIA Water spray, CO <sub>2</sub> or dry chemical extinguishers.			
SPECIAL FIRE FIGHTING PROCEDURES Personnel engaged in fire fighting must wear self contained breathing apparatus.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

\*PLEASE DO NOT USE GENERALIZATIONS, SUCH AS PETROLEUM HYDROCARBONS, ALCOHOL, KETONES.  
USE SPECIFIC CHEMICAL NAMES, SUCH AS METHANOL, BENZENE, PERCHLOROETHYLENE.

### SECTION V: HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE Comp R. - not established, Comp. T. Max.atmosph.concentr.for 8 hrs

0.02 ppm

EFFECTS OF OVEREXPOSURE Comp. T. only - Mucous membrane irritation and tightness of chest, irritation of respiratory tract, headache and shortness of breath.  
Exposure can lead to allergenic sensitivity.

EMERGENCY AND FIRST AID PROCEDURES Both Component - Skin contact - wash with soap and water for at least 5 minutes. Eye contact - wash for at least 15 minutes with large amounts of water and consult eye physician.

Internal- Induce vomiting and consult physician  
Inhalation (Comp.T. only) remove to uncontaminated area & administer oxygen.

### SECTION VI: REACTIVITY DATA

STABILITY	UNSTABLE	X	CONDITIONS TO AVOID Comp. T. only Contact with moisture and other materials reacting with isocyanate
	STABLE	X	Component R

INCOMPATIBILITY (MATERIALS TO AVOID) Comp. T. only - Avoid contact with water, alcohols, strong bases, metal compounds and surface active material.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID Avoid contact with moisture Component T
	WILL NOT OCCUR		

### SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Comp. T = Spilled chemicals should be covered with sawdust and treated with alcohol or dilute ammonium hydroxide and water in an open container before disposal.

Comp R. = Use oil absorbing compound and flush with large amounts of water.

WASTE DISPOSAL METHOD

Should be in accordance with Federal, State and Local environmental control regulations.

### SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE) Canister type gas masks for organic vapors supplied from external air source-self contained breathing apparatus.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (GENERAL) Maintain vapor concentrations below TLV	OTHER

PROTECTIVE GLOVES

Chemical resistant rubber or plastic

EYE PROTECTION

Protective goggles/suitable for liquid

OTHER PROTECTIVE EQUIPMENT Eye wash stations and safety showers; provide handling. also containers with tincture green soap in work areas.

### SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Must be stored in tightly sealed containers and protected from moisture and foreign materials. Store at 65° - 85° F.

OTHER PRECAUTIONS

*Werner A. Breuer*  
PREPARED BY  
Werner A. Breuer, Tech. Director

11-27-72

DATE

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U.S. DEPARTMENT OF LABOR  
WORKPLACE STANDARDS ADMINISTRATION  
BUREAU OF LABOR STANDARDS  
**MATERIAL SAFETY DATA SHEET**

FORM NO. OSHA-20 (MODIFIED)  
MAY 1971

MDC CONTROL NO.

DMS  
2061

**SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION**

MANUFACTURER'S NAME CPR Division, The Upjohn Company		EMERGENCY TELEPHONE NO. (213) 320-3550
ADDRESS (NUMBER, STREET, CITY, STATE AND ZIP CODE) 555 Alaska Avenue, Torrance, California 90503		
CHEMICAL NAME AND SYNONYMS Polyester-TDI Copolymer in TDI Solution		TRADE NAME AND SYNONYMS DMS 2061 Isonate® CPR 17-2C Component A
CHEMICAL FAMILY Isocyanate	FORMULA Polymeric mixture. DNA	

**SECTION II: HAZARDOUS INGREDIENTS\***

PAINTS, PRESERVATIVES/SOLVENTS	%	TLV (UNITS)	ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES*				%	TLV (UNITS)
Toluene diisocyanate (TDI)				70	0.02 ppm
Polyester/TDI Copolymer				30	0.02 ppm

**SECTION III: PHYSICAL DATA**

BOILING POINT (°F)	484	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	77°F.	1.22
VAPOR PRESSURE (mm Hg.)	77°F	PERCENT VOLATILE BY VOLUME (%)		100
VAPOR DENSITY (AIR = 1)	6	EVAPORATION RATE (Water = 1)		> 1
SOLUBILITY IN WATER	Reacts			

APPEARANCE AND ODOR    Colorless to yellow liquid; pungent irritating odor

**SECTION IV: FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED)	270°F. Tag Open Cup	FLAMMABLE LIMITS	LeI	UeI
			Unknown	Unknown
EXTINGUISHING MEDIA    Water, CO <sub>2</sub> , foam, dry chemical				

**SPECIAL FIRE FIGHTING PROCEDURES**

Excessive heat and thermal decomposition generates irritating and possibly toxic fumes and isocyanate vapors. Fire fighters should wear self-contained breathing apparatus.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

\*PLEASE DO NOT USE GENERALIZATIONS, SUCH AS PETROLEUM HYDROCARBONS, ALCOHOL, KETONES.  
USE SPECIFIC CHEMICAL NAMES, SUCH AS METHANOL, BENZENE, PERCHLOROETHYLENE.

# SECTION V: HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

0.02 ppm

EFFECTS OF OVEREXPOSURE

Lachrymator. Irritates eyes, nose and throat. Massive exposure to high vapor concentration

may cause bronchitis, bronchial spasm or pulmonary edema. May be allergenic.

EMERGENCY AND FIRST AID PROCEDURES

Remove from contaminated area. If breathing is labored, oxygen should be administered by

trained personnel. Obtain medical attention.

# SECTION VI: REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Excessive heat.

INCOMPATIBILITY (MATERIALS TO AVOID)

Atmospheric moisture, strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Isocyanate vapors, CO, CO<sub>2</sub>, traces of nitrogen oxides and HCN.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	Moisture. Confinement in a closed container in the

presence of moisture may lead to dangerous pressure (CO<sub>2</sub>) generation.

# SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Cover spill with sawdust or other absorbent material. Neutralize with dilute

aqueous ammonia/isopropanol solution. Neutralized material (solid polyurea) is innocuous.

WASTE DISPOSAL METHOD

Sweep up. Dispose of by any standard method consistent with good industrial practice.

# SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)

In confined areas, chemical cartridge respirator or independent air supply face mask.

VENTILATION	LOCAL EXHAUST	SPECIAL
	Recommended	
	MECHANICAL (GENERAL)	OTHER
	Recommended	

PROTECTIVE GLOVES	EYE PROTECTION
Recommended	In face mask or wear chemical goggles.

OTHER PROTECTIVE EQUIPMENT  
None required

# SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in unopened containers at 70-90°F. If entire content of container is not used at one

time, replace outage with dry nitrogen.

OTHER PRECAUTIONS

Mildly toxic. LD<sub>50</sub> exceeds 5000 mg/kg in rats. Do not ingest.

S. J. Assony, Ph.D.

PREPARED BY

19 December 1972

DATE



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ADDRESS (NUMBER, STREET, CITY, STATE AND ZIP CODE) 555 Alaska Avenue, Torrance, California 90503		
CHEMICAL NAME AND SYNONYMS DNA	TRADE NAME AND SYNONYMS DMS 2061 Isonate® CPR 17-2C Component B	
CHEMICAL FAMILY Polyester polyol mixture	FORMULA Mixture DNA	

**SECTION II: HAZARDOUS INGREDIENTS\***

PAINTS, PRESERVATIVES/SOLVENTS	%	TLV (UNITS)	ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES*				%	TLV (UNITS)
Polyadipate polyol resin				90	Unknown
Tertiary amine				0.2	25

**SECTION III: PHYSICAL DATA**

BOILING POINT (°F)	DNA	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	1.1
VAPOR PRESSURE (mm Hg.)	Nil	PERCENT VOLATILE BY VOLUME (%)	Nil
VAPOR DENSITY (AIR = 1)	DNA	EVAPORATION RATE (_____ = 1)	DNA
SOLUBILITY IN WATER	Nil		

APPEARANCE AND ODOR

**SECTION IV: FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED) > 300°F. Tag Open Cup	FLAMMABLE LIMITS	Lel None known	Uel None known
EXTINGUISHING MEDIA Water, foam, CO <sub>2</sub> , dry chemical			
SPECIAL FIRE FIGHTING PROCEDURES None required			

UNUSUAL FIRE AND EXPLOSION HAZARDS

None

\*PLEASE DO NOT USE GENERALIZATIONS, SUCH AS PETROLEUM HYDROCARBONS, ALCOHOL, KETONES.  
USE SPECIFIC CHEMICAL NAMES, SUCH AS METHANOL, BENZENE, PERCHLOROETHYLENE.

## SECTION V: HEALTH HAZARD DATA

### THRESHOLD LIMIT VALUE

25 ppm (tertiary amine)

### EFFECTS OF OVEREXPOSURE

Contains small amount of tertiary amine. Massive eye exposure to liquid or repeated exposure to amine vapor may cause halo vision or corneal opacity.

### EMERGENCY AND FIRST AID PROCEDURES

If liquid contacts eyes, flush eyes with copious quantities of water for at least 15 minutes.

Follow with ophthalmic boric acid solution. Obtain medical attention.

## SECTION VI: REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

### INCOMPATIBILITY (MATERIALS TO AVOID)

### HAZARDOUS DECOMPOSITION PRODUCTS

Amine vapor, CO, traces of nitrogen oxides and HCN produced by combustion.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

## SECTION VII: SPILL OR LEAK PROCEDURES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Cover with sawdust or other absorbent material. Sweep up. Wash down area with methylene chloride, observing manufacturer's precautions.

### WASTE DISPOSAL METHOD

Dispose of by any method consistent with good industrial practice.

## SECTION VIII: SPECIAL PROTECTION INFORMATION

### RESPIRATORY PROTECTION (SPECIFY TYPE)

None required. When used with CPR 17-2C Component A, see Safety Data Sheet.

VENTILATION	LOCAL EXHAUST	SPECIAL
	Recommended	
	MECHANICAL (GENERAL)	OTHER
	Recommended	

PROTECTIVE GLOVES	EYE PROTECTION
Not required	Chemical goggles

### OTHER PROTECTIVE EQUIPMENT

## SECTION IX: SPECIAL PRECAUTIONS

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in unopened containers at 70-90°F.

### OTHER PRECAUTIONS

None required

S. J. Assony, Ph.D.

19 December 1972

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